

L Number	Hits	Search Text	DB	Time stamp
1	288	345/345/209.ccls. or 345/96.ccls.	USPAT	2004/03/02 13:27
2	9417	345/87-103.ccls. or 345/208-210.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 13:28
3	2726	(345/87-103.ccls. or 345/208-210.ccls.) and polarit\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 14:32
4	452	(ferroelectric\$ or ferro-electric\$3) NEAR2 (liquid NEAR2 crystal or lc) SAME asymmetric	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 14:25
5	11	((345/87-103.ccls. or 345/208-210.ccls.) and polarit\$3) and ((ferroelectric\$ or ferro-electric\$3) NEAR2 (liquid NEAR2 crystal or lc) SAME asymmetric)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 14:25
6	1216	(345/87-103.ccls. or 345/208-210.ccls.) and (revers\$3 or invers\$3) NEAR2 (polarit\$3 or positive or negative)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 14:33
7	7	((ferroelectric\$ or ferro-electric\$3) NEAR2 (liquid NEAR2 crystal or lc) SAME asymmetric) and ((345/87-103.ccls. or 345/208-210.ccls.) and (revers\$3 or invers\$3) NEAR2 (polarit\$3 or positive or negative))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/02 14:34

INPUT DEVICE**BACKGROUND OF THE INVENTION**

This invention relates to an input device for use with a display device such as a cathode ray tube (CRT) as a computer terminal, and more particularly to a touch type input device which is pressable by a touch pen or the like is detected.

Various systems have been proposed so far for this type of input devices, for example, an electrode contact type in which membrane switches are contained, a photo matrix type wherein a light source and a photo-sensor are used in combination such that a coordinate of an obstacle on a light path may be detected thereby, a pressure type wherein pressure by touch is detected, and a surface elastic wave type of a surface wave along a panel surface. Among these types of systems, and a panel type a propagation time of a surface wave along a panel surface.

However, a coordinate input device of the conventional reduced in cost comparing with the remaining types, electrode contact type is simpler in construction and is electrode contacts which employ a transistor key board.

Electrode contacts of a resistor layer 2 which are provided in a resistor layer 2 of a conductive paint which is applied a resistor layer 2 of a conductive paint which is made by suitably mixing carbon and any other conductor, the input device includes an insulator sheet 1 which is substantially a resistor layer 2 having the X and Y axes and also in the resistor layer 2 in the direction along the X axis ends of the resistive material or materials. Opposite ends of the resistive material or materials, opposite ends of the resistive material leads 4 are rearranged in equally spaced relationship along the X and Y axes, and a fixed voltage is applied across terminals 3 of the insulator sheet 1. The terminal leads 4 are individually connected to diodes 5 to define directions of flows of electric currents in the directions along the X and Y axes.

In FIG. 3 and so on over a predetermined area. According to this invention, and so on, a membrane of a metal oxide such as In₂O₃ and so on over a metal oxide such as Ag, Pd and so on, or a metal material such as Ag, Pd, thence to a membrane of a metal powder is putted or sprayed onto plastic film which employs a transpar-

membrane electrodes have fine powder of a conductive material dispersed in a synthetic resin matrix. But, dispersion of such metal powder is not always uniform, and hence, accurate detection of coordinates is sometimes obstructed and satisfactory strength cannot be attained.

Therefore, a coordinate input device of a conductive membrane electrodes have fine powder of a conductive material dispersed in a synthetic resin matrix which becomes low and the life becomes short. Further, some mechanical strength so that the available percentage that it has a relatively high resistance and a rather low resistance, but it is difficult to disassemble because in that it has a relatively high resistance and a rather low resistance, and hence, accurate detection of coordinates is sometimes obstructed and satisfactory strength cannot be attained.

Accordingly, it is an object of the present invention to provide an input device which is simple in construction to detect a position of a coordinate of a point on a screen of a display device.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of an input device according to the present invention, with a part thereof omitted;

FIG. 2 is a cross sectional view of part of the input device;

FIG. 3 is a similar cross sectional view of part of the input device in a partially depressed condition; and

FIG. 4 is a partly fragmentary perspective view showing the entity of the input device.

Referring to FIG. 1, there is shown a plan view of an embodiment of an input device of the present invention which is constructed as an input device for detecting the entity of the input device in a partly fragmentary perspective view.

Two coordinate display device includes an insulator sheet 1 a two coordinate display device of the type wherein coordinates in a direction perpendicular to the X and Y axes are detected. The input device includes an insulator sheet 1 which is substantially a resistor layer 2 having the X and Y axes and also in the resistor layer 2 in the direction along the X axis ends of the resistive material or materials. Opposite ends of the resistive material or materials, opposite ends of the resistive material leads 4 are rearranged in equally spaced relationship along the X and Y axes, and a fixed voltage is applied across terminals 3 of the insulator sheet 1. The terminal leads 4 are individually connected to diodes 5 to define directions of flows of electric currents in the directions along the X and Y axes.

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DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1, there is shown a plan view of an embodiment to the present invention, with a part thereof omitted;

FIG. 2 is a cross sectional view of part of the input device;

FIG. 3 is a similar cross sectional view of part of the input device in a partially depressed condition; and

FIG. 4 is a partly fragmentary perspective view showing the entity of the input device.

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